

[illegible]

```
CCCCCCCCC HH HH KK KK SSSSSSSS UU UU MM MM
CCCCCCCCC HH HH KK KK SSSSSSSS UU UU MM MM
CC CC HH HH KK KK SS SSSSSSSS UU UU MMMM MMMM
CC CC HH HH KK KK SS SS UU UU MM MM MM MM
CC CC HH HH KK KK SS SS UU UU MM MM MM MM
CC CC HHHHHHHHHH KKKKKK SSSSSS UU UU MM MM MM MM
CC CC HHHHHHHHHH KKKKKK SSSSSS UU UU MM MM MM MM
CC CC HH HH KK KK SS SS UU UU MM MM MM MM
CC CC HH HH KK KK SS SS UU UU MM MM MM MM
CC CC HH HH KK KK SSSSSSSS UUUUUUUUUU MM MM
CCCCCCCCC HH HH KK KK SSSSSSSS UUUUUUUUUU MM MM
CCCCCCCCC HH HH KK KK SSSSSSSS UUUUUUUUUU MM MM
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LL LL I I I I I SSSSSSSS
LL LL I I I I I SSSSSSSS
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LL LL I I SS
LLLLLLLLLL I I I I I SSSSSSSS
LLLLLLLLLL I I I I I SSSSSSSS
```

```
1 0001 0 MODULE CHKSUM (
2 0002 0 LANGUAGE (BLISS32),
3 0003 0 IDENT = 'V04-000',
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
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27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1
31 0031 1 **
32 0032 1
33 0033 1 FACILITY: F11ACP Structure Level 1
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1 This routine computes and checks a file header checksum.
38 0038 1
39 0039 1 ENVIRONMENT:
40 0040 1
41 0041 1 STARLET operating system, including privileged system services
42 0042 1 and internal exec routines.
43 0043 1
44 0044 1 --
45 0045 1
46 0046 1
47 0047 1 AUTHOR: Andrew C. Goldstein, CREATION DATE: 22-Nov-1977 22:25
48 0048 1
49 0049 1 MODIFIED BY:
50 0050 1
51 0051 1 A0100 ACG0001 Andrew C. Goldstein, 10-Oct-1978 20:01
52 0052 1 Previous revision history moved to F11A.REV
53 0053 1
54 0054 1 **
55 0055 1
56 0056 1
57 0057 1 LIBRARY 'SYS$LIBRARY:LIB.L32';
```


CHKSUM
V04-000

; 58

0058 1 REQUIRE 'SRC\$:FCPDEF.B32';

^{0 9}
16-Sep-1984 00:50:35
14-Sep-1984 12:29:21

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DISK\$VMSMASTER:[F11A.SRC]CHKSUM.B32;1 Page 2 (1)

CLF
V04

.....

: 1

```

60 0373 1 GLOBAL ROUTINE CHECKSUM (HEADER) =
61 0374 1
62 0375 1 ++
63 0376 1
64 0377 1 FUNCTIONAL DESCRIPTION:
65 0378 1
66 0379 1 This routine computes, checks, and stores the checksum of a file header.
67 0380 1
68 0381 1 CALLING SEQUENCE:
69 0382 1 CHECKSUM (ARG1)
70 0383 1
71 0384 1 INPUT PARAMETERS:
72 0385 1 ARG1: address of file header buffer
73 0386 1
74 0387 1 IMPLICIT INPUTS:
75 0388 1 NONE
76 0389 1
77 0390 1 OUTPUT PARAMETERS:
78 0391 1 NONE
79 0392 1
80 0393 1 IMPLICIT OUTPUTS:
81 0394 1 NONE
82 0395 1
83 0396 1 ROUTINE VALUE:
84 0397 1 1 if checksum was correct
85 0398 1 0 if checksum was wrong
86 0399 1
87 0400 1 SIDE EFFECTS:
88 0401 1 Correct checksum stored in header
89 0402 1
90 0403 1 --
91 0404 1
92 0405 2 BEGIN
93 0406 2
94 0407 2 MAP
95 0408 2 HEADER : REF VECTOR [,WORD];
96 0409 2
97 0410 2 LOCAL
98 0411 2 P : REF VECTOR [,WORD], ! pointer to scan header
99 0412 2 SUM : WORD, ! checksum value
100 0413 2 MATCH; ! success flag
101 0414 2
102 0415 2
103 0416 2 ! We simply sum the first 255 words of the file header. Then we compare the
104 0417 2 ! checksum in the header with the one computed, and store the new one.
105 0418 2 !
106 0419 2
107 0420 2 SUM = 0;
108 0421 2 P = .HEADER;
109 0422 2 DECR I FROM 255 TO 1
110 0423 2 DO
111 0424 2 BEGIN
112 0425 2 SUM = .SUM + .P[0];
113 0426 2 P = .P + 2;
114 0427 2 END;
115 0428 2
116 0429 2 MATCH = .SUM EQL .P[0];
```

CHKSUM
V04-000

F 9
16-Sep-1984 00:50:35
14-Sep-1984 12:29:21

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(2)

```
: 117      0430 2 PC0] = .SUM;
: 118      0431 2
: 119      0432 2 RETURN .MATCH;
: 120      0433 2
: 121      0434 1 END;
```

! end of routine CHECKSUM

.TITLE CHKSUM
.IDENT \V04-000\

.PSECT \$CODE\$,NOWRT,2

```
0004 00000
51      04 52 B4 00002
50      FF AC D0 00004
52      8F 9A 00008
FA      81 A0 0000C 1$:
61      50 F5 0000F
        50 D4 00012
        52 B1 00014
        02 12 00017
        50 D6 00019
61      52 B0 0001B 2$:
        04 0001E
```

```
.ENTRY CHECKSUM, Save R2
CLRW SUM
MOVL HEADER, P
MOVZBL #255, 1
ADDW2 (P)+, SUM
SOBGTR 1, 1$
CLRL R0
CMPW SUM, (P)
BNEQ 2$
INCL R0
MOVW SUM, (P)
RET
```

```
: 0373
: 0420
: 0421
: 0422
: 0425
: 0422
: 0429
:
: 0430
: 0434
```

; Routine Size: 31 bytes, Routine Base: \$CODE\$ + 0000

```
: 122      0435 1
: 123      0436 1 END
: 124      0437 0 ELUDOM
```

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	31	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPI,ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_ \$255\$DUA28:[SYSLIB]LIB.L32;1	18619	1	0	1000	00:01.9

CHKSUM
V04-000

⁶
16-Sep-1984 00:50:35
⁹
14-Sep-1984 12:29:21

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DISK\$VMSMASTER:[F11A.SRC]CHKSUM.B32;1 Page 5 (2)

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:CHKSUM/OBJ=OBJ\$:CHKSUM MSRC\$:CHKSUM/UPDATE=(ENHS:CHKSUM)

: Size: 31 code + 0 data bytes
: Run Time: 00:05.1
: Elapsed Time: 00:19.2
: Lines/CPU Min: 5161
: Lexemes/CPU-Min: 12224
: Memory Used: 62 pages
: Compilation Complete

0164 AH-BT13A-SE
VAX/VMS V4.0

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CHKSUM
LIS

ALPCNTR
LIS

CHKPRO
LIS

FCPDEF
B32

DEACCS
LIS

BADSCN
LIS

CLENUP
LIS

CPYNAM
LIS

CHKHDR
LIS

COMMON
LIS

CREHDR
LIS

CREWIN
LIS

ALDOB
LIS

ACCESS
LIS

CHKDMD
LIS

DELETE
LIS

CREATE
LIS

CREFLB
LIS